

Effect of Ownership Structure on Corporate Diversification of Listed Firms in Kenya: The Moderating Role of Capital Structure

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Abstract

Purpose - This paper aimed to examine the moderating role of capital structure in the relationship between institutional and foreign ownerships on corporate diversification of listed firms at the Nairobi Securities Exchange, Kenya.

Design/Methodology - The target population comprised of all the 65 listed firms at Nairobi Securities Exchange in Kenya. However, the inclusion criteria were based on all firms listed at the NSE from 2003 to 2017.

Findings - Capital structure significantly moderated the relationship between institutional ownership and corporate diversification. However, there was a statistically insignificant moderating effect of capital structure in the relationship between foreign ownership and corporate diversification.

Practical Implications - As to increase diversification, listed firms are suggested to have low levels of capital structure and institutional ownership. Furthermore, low levels of foreign ownership and high capital structure is vital in attaining high diversification levels.

Originality - The study contribution is the moderating effect of capital structure in institutional ownership - corporate diversification linkage.

Introduction

Investment decisions are known to be part of any organization's budget. In most firms, investment is done to raise income, preserving capital's real value and to grow funds which meet future needs as a result of capital appreciation (Trygve, 2006). With risk exposures, these objectives are only achieved if there are various assets invested by the organization. As a result, corporate diversification concept has been found to form the basis of the discussion by main contributors such as Markowitz, Chandler, and Rumelt in 1952, 1962 and 1982 respectively. Singling out (Rumelt, 1974) and (Rumelt, 1982), diversification aids firm in entering new markets or product lines which are different from existing ones. Through diversification, firm enhances its market power, efficiently utilize its resources (Montgomery, 1994) and heighten performance (Krivokapic, Njegomir, & Stojic, 2017) as well as investment opportunities (Pawaskar, 1999). However, from an agency theory perspective, agents and principals are opportunists who seek to maximize their own needs in a firm (Jensen & Meckling, 1976). (Hansmann, 2000) noted that investment choices in the firm are influenced by shareholder interests. As a rejoinder, each category of shareholders has varied investment priorities and preferences (Thomsen & Pedersen, 2000). Consequently, shareholders' view of diversification varies given the differences in their motivation, capabilities, and control (Hautz, Mayer, & Stadler, 2013). Therefore given shareholders, ownership structure has been linked to corporate diversification.

Shareholders according to the seminal work by (Demsetz, 1983) in a firm can be distinguished based on the fraction of shares held. On the other hand, categorization of shareholders may be based on their types which include managerial, state, foreign and institutional (Leech & Leahy, 1991). Most studies linking ownership structure and corporate diversification are regarded by (David, O'Brien, Yoshikawa, & Delios, 2010) as deficient as different types of owners can pursue varied goals. In most firms, shareholders with a significant number of shares influence most decisions. As a result, institutional and foreign ownership concepts were important in the study. To begin with, institutional investors are major actors (Gharbi & Jarboui, 2017) with control (Gomez, 2014) and influence on firm's strategy decisions (Lacoste, Lavigne, & Rigamonti, 2010). In terms of investments, institutional investors monitor and mitigate diversification discount (Hartzell, Sun, & Titman, 2014), are known to be prudent (Jafarinejad, Jory, & Ngo, 2015), careful and cautious (Bushee, Carter, & Gerakos, 2013). In the long run, such investors affect the type and level of investment decisions taken by management (Al-Thuneibat, 2018). To elaborate on the relationship between institutional ownership and corporate diversification, studies have been conducted in India (Ramaswamy, Li, & Veliyath, 2002), Europe (Hautz et al., 2013), United States (Tihanyi, Johnson, Hoskisson, & Hitt, 2003); (Jafarinejad et al., 2015) and Tunisia (Gharbi & Jarboui, 2017). Secondly, foreign investors are known to have a sole objective of maximizing their portfolios (Thai, 2019). In the process, foreign investors not only influence decisions but also provide access to resources (Ongore, 2011) such as assets (Kimura & Kiyota, 2007), equity capital (Gurunlu & Gursoy, 2010) and external financing (Koo & Maeng, 2006). In Vietnam, (Phung, Phan, Nguyen, & Le, 2016) examined the effect of foreign ownership on corporate diversification.

Corporate diversification is capital intensive as it requires more financial resources for its successful implementation. As both institutional and foreign owners push for more diversification in the firm, sourcing of finances as explained by capital structure is considered. For this reason, capital structures interfere with the connection between ownership structure and corporate diversification. From the studies, the presence of institutional investors positively affects the capital structure (Brailsford, Oliver, & Pua, 2002); (Huang, Lin, & Huang, 2011). Other studies have document negative (Çinko & Kasaboğlu, 2017), no significant relationship (Pirzada, Mustapha, & Wickramasinghe, 2015) between institutional ownership and capital structure. Furthermore, mixed results have been found in terms of the relationship between foreign ownership and capital structure. These from findings include positive (Sivathaasan, 2013), negative (Li, Yue, & Zhao, 2009); (Gurunlu & Gursoy, 2010); (Khasawneh & Staytich, 2017) and no significant relationship (Zou & Xiao,

2006). As well, there exists a linear relationship between corporate diversification and capital structure (Singh, Davidson III, & Suchard, 2003) ; (Su, 2010).

Notwithstanding significant studies addressing relationship given institutional ownership, foreign ownership, corporate diversification, and capital structure, there still exists a gap to be filled. In listed firms, shareholders hold shares in exchange for their capital contributed. Ownership structure thus outlines the distribution of equity in a firm based on the fraction of shares held given total capital and identity of equity holders (Demsetz & Villalonga, 2001). According to agency theory proponents, shareholders (principals) delegate to managers (agents) the authority of making decisions on their behalf. Regardless of their type, shareholders in most listed firms have diverse investment choices that seek to improve maximize the profitability of the firm as well as maximizing their wealth. Moreover, shareholders through managers pursue diversification as a strategy to boost the performance of the firm as well as maximizing shareholders' wealth. As a result, there exists a direct relationship between ownership structure and corporate diversification. To realize objectives of diversification, more financial resources are required which can either be raised through debt or equity. Therefore, despite that owners seek to pursue corporate diversification, the entire process is determined by capital structure. The researchers' thirst was thus to test hypotheses H_{01} and H_{02} ;

H_{01} : Capital structure does not moderate the relationship between institutional ownership and corporate diversification of listed firms at NSE in Kenya.

H_{02} : Capital structure does not moderate the relationship between foreign ownership and corporate diversification of listed firms at NSE in Kenya.

Conceptual Framework

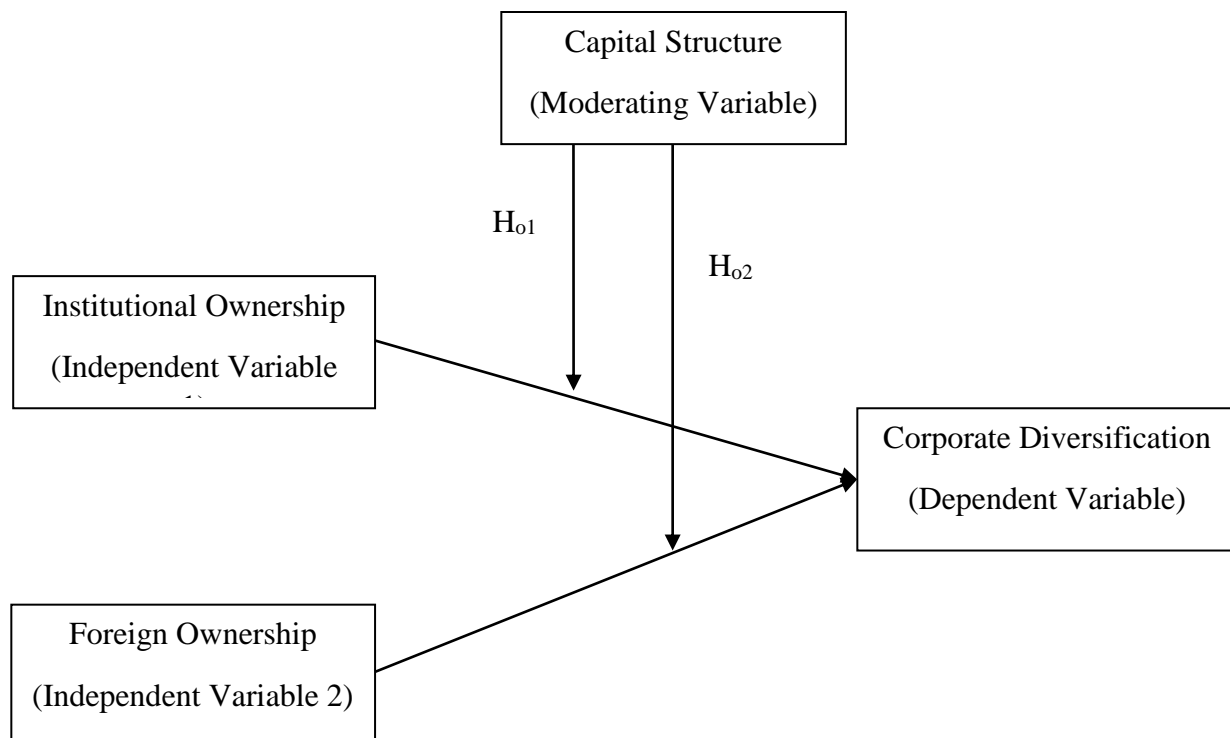


Figure 1 - Conceptual Framework of the Study

Literature Review

Relationship between Institutional Ownership and Corporate Diversification

Across firms, ownership structure varies due to differences arising from the scale of economies, regulation, and stability of the environment of operation (Demsetz & Villalonga, 2001). Despite this, (Demsetz & Villalonga, 2001) pointed out that approximate and appropriate ownership structure is brought forth. Given shareholder wealth maximization objective, ownership structure whether relating to managerial, institutional or foreign investors is aimed at improving a firm's performance. Primarily out of the others, institutional investors stand out as the main actors (Gharbi & Jarboui, 2017) given that they have more control due to their relatively large shareholding (Zhang & Kyaw, 2016). As effective owners (Fazlzadeh, Hendi, & Mahboubi, 2011), institutional investors pressure the management team to progress performance (Zhang & Kyaw, 2016). This has been avowed by empirical findings which have positively linked institutional ownership (Fazlzadeh et al., 2011); (Hussain Tahir, 2015), (Masry, 2016); (Zhang & Kyaw, 2016) to firm's performance. In most cases, active behavior of institutional investors is more apparent as they solely have investment relations with the firm (Sahut & Gharbi, 2010). According to (Hartzell et al., 2014), institutional investors actively monitor decisions relating to corporate diversification. Therefore, institutional owners in a firm look forward to harnessing more returns which in turn leaves a firm with no option but to diversify. Empirically, there exists a positive link between institutional ownership and corporate diversification (Tihanyi et al., 2003); (Deng, Elyasiani, & Jia, 2013); (Jafarinejad et al., 2015); (Gharbi & Jarboui, 2017).

Relationship between Foreign Ownership and Corporate Diversification

In terms of performance, firms with foreign investors as part of their ownership structure perform better (Ongore, 2011); (Pervan, Pervan, & Todoric, 2012); (Hintošová & Kubíková, 2016). For this reason, (Phung & Mishra, 2016) believed that foreign ownership needs to be promoted by policymakers in firms. Other than improving performance, foreign investors, unlike others, are extraordinary. Through their strong network (Koo & Maeng, 2006); (Mihai, 2012), reputation and relation (Li et al., 2009), more resources are attracted to the firm (Ongore, 2011). To be specific, foreign investors contribute capital through equity ownership (Gurunlu & Gursoy, 2010), varied sources of finances (Li et al., 2009), and resources in form of specified assets (Kimura & Kiyota, 2007). Once resources are availed, a firm could improve its performance by engaging in decisions as diversification. From the empirical review, recent studies have examined the nexus that exist between foreign ownership and financial performance (Hintošová & Kubíková, 2016); (Phung & Mishra, 2016); (Zraiq & Fadzil, 2018). On the contrary, few researchers have focused on the effect of foreign investors on corporate diversification. (Phung et al., 2016) in Vietnam conducted a study that sought to determine the effect of foreign ownership on corporate diversification. As a result, data analyzed from 2007 to 2012 indicated a negative relationship between foreign ownership and corporate diversification.

Moderating Role of Capital Structure

Majority of the firms need to finance their activities regardless of the stage (newly born' or mature) (Chechet & Olayiwola, 2014). In this case, a single source of financing is not reliable hence debt and equity are incorporated (Chen & Chen, 2011). Thus, capital structure as defined by seminal work of Modigliani and Miller (MM) of 1958 is the mix between debt and equity to be utilized in financing operations in an organization (Modigliani & Miller, 1958). The work of financial managers, therefore, is the determination of optimum combination between debt and equity (Akeem, Terer, Kiyanjui, & Kayode, 2014). Therefore, capital structure is important in the valuation of the firm (Welch, 2004). Besides the valuation of the firm, capital structure has been found to improve the firm's performance (Tarek Al-Kayed, Raihan Syed Mohd Zain, & Duasa, 2014). Despite this positive impact on financial performance, other authors have found a negative (Ahmed Sheikh & Wang, 2013); (Nassar, 2016) and no significant impact (Al-Taani, 2013) of capital structure

on firm performance. However, contrary to this, some authors have looked into the proportion of debt or equity used by the firm. According to (Hovakimian, Opler, & Titman, 2001), more debt should be utilized by firms as they mature while (Datta, Iskandar-Datta, & Raman, 2005) points out that the same occurs when the firm has more growth opportunities. This is in contrast with (Jensen, 1986) who states that firms with great investment opportunities use more equity but less debt.

In regards to the activities of the firm, shareholders are principals. They look forward to enhancing investment opportunities to maximize their wealth which depends on the availability of financial resources. Anchoring therefore on the proportion of debt and equity to be used by the firm according to (Jensen, 1986), (Hovakimian et al., 2001) and (Datta et al., 2005), there is a possibility that capital structure interferes with decisions made by the firm. Surprisingly, the moderating effect of capital structure has been overlooked despite (David et al., 2010) hinting that studies on ownership structure and corporate diversification to be incomplete. Researchers have dwelled instead of direct relationships. For instance, direct relationship between capital structure given institutional ownership (Brailsford et al., 2002); (Huang et al., 2011); (Pirzada et al., 2015); (Çinko & Kasaboğlu, 2017), foreign ownership (Sivathaasan, 2013); (Khasawneh & Staytieh, 2017); (Thai, 2019) has been conducted. Institutional and foreign ownership have been linked directly to corporate diversification by (Gharbi & Jarboui, 2017) and (Phung et al., 2016) respectively. Moreover, corporate diversification has been linked to capital structure (Monteforte & Staglianò, 2015); (Jouida & Hellara, 2018); (Nzioka, 2017). Despite that studies have been conducted regarding ownership structure concepts, capital structure and corporate diversification, more need to be done. There is a need to address the existing gap since most empirical studies have examined direct relationships regarding ownership structure, capital structure, and corporate diversification. The study purposed, therefore, to find out the interaction effect of capital structure with respective institutional and foreign ownerships on corporate diversification.

Theoretical Perspectives

First and foremost, this study is anchored on modern portfolio theory (MPT) by Markowitz (1952). Since 1952, the work of Harry Markowitz has laid the foundation for other scholars. Several models have been developed starting with Capital Asset Pricing Model (CAPM) by William Sharpe in 1966, Jack Treynor in 1962, John Lintner in 1965 and Jan Mossin in 1966 (Perold, 2004). CAPM model is key since it describes how investors determine expected returns and pricing of risky assets. Other model developed include Multi-index model (Cohen & Pogue, 1967), limited diversification model (Jacob, 1974) and simple criteria (Elton, Gruber, & Padberg, 1976); (Schnabel, 1984). Moreover, MPT led to the introduction of Black-Litterman model in 1991 (Black & Litterman, 1992) as well as Global Minimum Variance Portfolio (GMVP) by Kempf and Memmel in 2003 which is used in denoting efficient stock portfolio (Maillet, Tokpavi, & Vaucher, 2015). The former was the output after combining the mean-variance optimization framework of Harry Markowitz and CAPM. Black-Litterman model that any given portfolio is optimal hence is a post MPT (PMPT) model according to (Rom & Ferguson, 1994). Commonly known as a mean-variance portfolio model, MPT principal proposition is that risk can be reduced through diversification. Besides, it explains returns as a function of expected risks.

MPT states that the risk of an individual asset does not matter rather what matters is its contribution to overall risk. Hence, diversification is key when forming a portfolio because the correlation between securities can reduce the overall risk of the portfolio. According to (Al-Thuneibat, 2018), institutional investors influence not only the type of investment decisions made in the firm but also their risk level. Foreign investors too seek to diversify their portfolios (Thai, 2019). Therefore, the presence of institutional and foreign investors will drive diversification given the main goal of maximization of wealth. For this reason, MPT led to the conceptualization of the link between institutional and foreign ownership with corporate diversification.

The trade-off theory of capital structure was developed by (Myers, 1984) long after the famous Modigliani and Miller theory of capital structure in 1958. From this theory, other theories closely related are static and dynamic trade-off theories. As for the latter, (Stiglitz, 1973) explains that the correct financing decision depends on the financing margin that the firm anticipates in the next period. Given this, the trade-off theory is set as a competitor of pecking order theory (Frank & Goyal, 2009).

Under static trade-off theory, firms have an optimal capital structure which they determine by trading off the costs against benefits given debt and equity (Myers, 1984); (Myers, 2001). It is where the firm sets target debt to equity ratio and moves towards it gradually. Hence, the optimal debt ratio is determined by the trade-off of the costs and benefits of borrowing, holding the firm's assets and investments constant. Static trade-off theory which explains well financial behavior of companies (Titman & Wessels, 1988); (Myers, 1984); (Frank & Goyal, 2009) can be categorized further to bankruptcy costs (Baxter, 1967) and agency costs (Jensen & Meckling, 1976). As much as institutional and foreign investors seek to boost corporate diversification, it is prudent to understand the interference effect of capital structure. In this case, optimal capital structure aids in balancing the costs against benefits given the utilization of debt and equity in financing diversification plans in the firm. Therefore, static trade-off theory in the study led to the conceptualization of the moderating role of capital structure in the relationship between institutional as well as foreign ownership and corporate diversification of listed firms at NSE in Kenya.

Methodology

The study was anchored on pragmatism research philosophy which according to (Zikmund, Babin, Carr, Adhikari, & Griffin, 2013) gives the researcher freedom to choose techniques, methods and procedures that best suit their needs and purpose. The explanatory research design was appropriate as the study sought to test the relationship between variables (Creswell, 2014). The target population comprised of all the 65 listed firms at NSE in Kenya (NSE, June, 2018). However, the inclusion criterion was based on all firms listed at the NSE from 2003 to 2017. All the suspended and delisted listed firms were excluded. As a result, panel data from audited financial reports were collected from 35 listed firms. 525 observations were therefore obtained from firms listed under sectors as Agricultural, Automobile and accessories, Banking, Commercial and Services, Construction and allied, Energy and Petroleum, Investment, Insurance, Manufacturing and allied. Descriptive statistics as mean, standard deviation, minimum and maximum were meant to describe data obtained. Pearson's product-moment correlation analysis aided in assessing the direction and association of variables. This was followed by diagnostic tests before panel regression analysis.

Moderating variable is known for affecting the direction and or strength of the relationship between the explanatory variable(s) and the outcome variable (Baron & Kenny, 1986; Hayes, 2017). Moderation can enhance, buffer or reverse the causal effect or relationship between independent and dependent variable the effect of explanatory variable on the outcome variable for a fixed value of a moderator is referred to as the simple effect of independent variable on its dependent variable (Aiken, West, & Reno, 1991); (Whisman & McClelland, 2005). Therefore to test indirect effects arising due to the moderating effect of capital structure in the relationship between ownership structure and corporate diversification, the bootstrapping procedure was followed. According to (Wood, 2003), bootstrapping is simple in deriving statistical estimates as well as being powerful given the ability of re-sampling dataset with replacement to estimate statistics. Other than controlling and checking for the stability of results, the bootstrapping procedure prevents biases since it is a non-parametric approach. As such, data need not be normally distributed hence uses random sampling to estimate the sampling distribution of any statistics. The panel regression model below was handy in testing the moderating effect of capital structure (CS) on the relationship between institutional ownership (IO) as well as foreign ownership (FO) and corporate diversification (CD);



$$CD_{it} = \alpha_0 + \alpha_1 IO_{it} + \alpha_2 CS_{it} + \alpha_3 (CS * IO)_{it} + e_{it} \dots \dots \dots 1$$

$$CD_{it} = \alpha_0 + \alpha_1 FO_{it} + \alpha_2 CS_{it} + \alpha_3 (CS * FO)_{it} + e_{it} \dots \dots \dots 2$$

Measurement of Variables

In tandem with (Saleh, Zahirdin, & Octaviani, 2017), institutional ownership comprised of the percentage of shares owned by institutional investors from both financial and nonfinancial organizations. Foreign ownership, on the other hand, was determined using the percentage of shares owned by foreign investors (Ongore, 2011); (Hintošová & Kubíková, 2016). Borrowing from studies as by (Akpınar & Yigit, 2016), (Krivokapic et al., 2017) and (Phung & Mishra, 2016), Jacquemin and Berry's Entropy measure was used as an indicator of corporate diversification. Capital structure is the mix of debt and equity which is utilized in financing the firm's operations (Modigliani & Miller, 1958). For capital structure, the study utilized the measurement approach by (Su, 2010), (Shoaib & Yasushi, 2015) who used debt to equity ratio.

Results

The study found the strongest correlation between CS and CD ($r = .289, p < 0.01$) as shown in Table 1. This is in line with the findings by (Singh et al., 2003) implying that more financial resources are required to finance corporate diversification in the firm. Moreover, the correlation between CS and IO was negative and insignificant ($r = -.076, p > 0.01$) compared to that between CS and FO ($r = -.120, p < 0.01$). This implies that as more debt and equity is raised by a firm, the number of institutional investors decline thereby supporting finding by (Çinko & Kasaboğlu, 2017). Moreover, the presence of foreign investors negatively impacts on firm's capital structure. This is in line with the opinions that majority of foreign investors have the links to diverse financial resources (Li et al., 2009) as well as huge equity capital contribution (Gurunlu & Gursoy, 2010). The minimum percentages of 0.25 and 0.00 showed that some firms do not value institutional and foreign investors as they may not be aware of their contributions to the firm. On the other hand, the maximum percentage of IO and FO implies that institutional and foreign investors matter a lot in some firms.

Table 1 - Summary Statistics and Correlation for Study Variables

	Mean	Std. Dev.	Min.	Max.	CD	IO	FO	CS
CD	0.588	0.411	0	1.523	1			
IO	34.450	23.849	0.25	87.14	-.183**	1		
FO	29.443	28.672	0	94.04	.085	-.603**	1	
CS	0.588	0.411	0	1.523	.289**	-.076	-.120**	1

** Correlation is significant at the 0.01 level (2-tailed)

CD was reported to have a mean of 0.588 and 0.411 standard deviation proportion of a firm's total sales from its product. The minimum value of CD was zero while the maximum is 1.523. The minimum value, in this case, implies that some firms choose to remain focused opposed to venturing into diversification. The minimum CD supports the views that CD may lead to misallocation of resources (Krishnaswami, Spindt, & Subramaniam, 1999) and may make managers use power earned through diversification to benefit themselves at the expense of owners (Jensen, 1986); (Shleifer & Vishny, 1989). Accordingly, the minimum value indicates that some firms avoid CD as it may negatively affect their performance (Hitt, Hoskisson, & Kim, 1997) and firm value (Manyuru, Wachira, & Amata, 2017). It was also found that CS had a minimum zero and maximum of 31.532 debts to equity ratio. The zero minimum debt to equity ratio depicted that some of the firms listed in NSE had no debt. This implies that firms without debts are cautious as to avoid the risk of defaulting and overburdening itself. In line with market timing theory, such firms issue equity instead of debt since related costs are low, the market value is higher compared to book value (Baker & Wurgler, 2002).

Diagnostic Tests

Panel data is stochastic or probabilistic because there is no accurate formula when prediction needs to be done. The study tested for unit root using three tests; Levin-Lin-Chu (LLC) (Levin, Lin, & Chu, 2002), Harris-Tzavalis (Harris & Tzavalis, 1999) and Im-Pesaran-Shin (IPS) (Im, Pesaran, & Shin, 2003).

Table 2 - Test for Stationarity of the Panel Data

LLC	Time trend included	CS	IO	FO	CD
	t-statistic	-2.134	-10.199	-9.343	-2.553
	p-value	.016	.000	.000	.005
	Time trend not included				
	t-statistic	-1.867	-12.975	-10.758	-4.554
	p-value	.041	.000	.000	.000
Harris-Tzavalis	Time trend included				
	z-statistic	-13.720	-32.610	-26.918	-21.361
	p-value	.000	.000	.000	.000
	Time trend not included				
	z-statistic	-23.503	-53.859	-44.475	-35.696
	p-value	.000	.000	.000	.000
IPS	Time trend included				
	z-statistic	-6.964	-15.435	-13.701	-11.8102
	p-value	.000	.000	.000	.000
	Time trend not included				
	z-statistic	-5.933	-15.415	-13.425	-11.598
	p-value	.000	.000	.000	.000

* Ho; All panels contain a unit root

For LLC panel unit root test as shown in Table 2, all the study variables were integrated at order zero $I(0)$. The results from Harris-Tzavalis showed the values of z-statistic are greater than 1.96 and their probabilities were less than 0.05 percent level of significance. In line with LLC and Harris-Tzavalis, IPS panel unit root test found the variables to be stationary at levels. The test also confirmed that the variables were stationary if the time trend was included or not included. Shapiro-Wilk test suggests that when the p-value is greater than 0.05 the data is normal. In the study, independent variables were not correlated (variance inflation factor value < 10). Using Breusch-Pagan/Cook-Weisberg test variances of residuals were found to be homogeneous (constant variance) or equally distributed across the levels of predicted values. The Durbin-Watson statistic was found to have a value of 2.0 which is within the acceptable range of 0 and 4.

Moderating Effect of Capital Structure in Institutional Ownership – Corporate Diversification Linkage

The results presented in Table 3 highlighted that CS in the study had a positive relationship with CD with a coefficient of $\beta = .04675$ this in agreement with those by (Singh et al., 2003). Divergent to this, IO had a negative ($\beta = -.34077$) influence on CD. As a result, CD decrease by 0.34077 units if there is one unit change in IO. This supports the finding by (Denis, Denis, & Sarin, 1997) who observed a negative relationship between block holder ownership, arising in this case given institutional investors and corporate diversification in the firm. In most firms, managers act as agents thereby making most decisions on behalf of

principals (owners). Given the negative relation between IO and CD, it implies that institutional investors' attention is not directed towards improving the diversification of the firm.

Table 3 - Moderating Effect of Capital Structure and Institutional Ownership

	Capital Structure	Interaction	Institutional Ownership	Corporate Diversification	
Capital Structure	0.0000000	0.00000000	0.00000000	0.00000000	
Interaction	0.0000000	0.00000000	0.00000000	0.00000000	
Institutional_Ownership	0.0000000	0.00000000	0.00000000	0.00000000	
Corporate_Diversification	0.0467524	0.3315649	-0.3407746	0.00000000	
	Original	Mean Boot	Std.Error	Percent 0.025	Percent 0.975
Intercept	0.67683	0.4875	0.15342	0.1291	0.4763
Capital_Structure > Corporate_Diversification	0.04675	0.0587	0.06644	-0.0598	0.1973
Interaction > Corporate_Diversification	0.33156	0.3187	0.09299	0.13900	0.5199
Institutional_Ownership > Corporate_Diversification	-0.34077	-0.3375	0.05784	-0.4556	-0.2335

The zero rows indicate that the lower triangular matrix was required to have a plot of bootstrap in Partial least squares path modeling (Plspm) according to R-Studio Statistical package

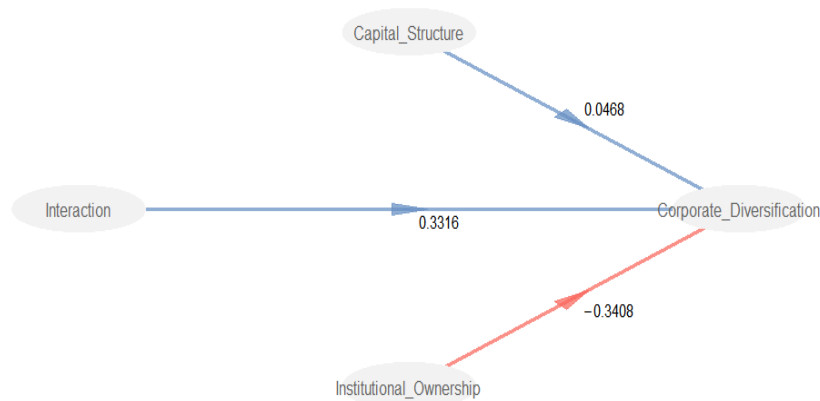


Figure 2 - Graphical Representation of Partial Least Squares Boots Path Diagram

Looking into the effect of moderating variable, the coefficient value of the interaction effect between CS and IO on CD was $\beta = .33156$. The study hypothesis (Ho1) on this moderation was; Capital Structure does not moderate the relationship between Institutional Ownership and Corporate Diversification of firms listed at NSE in Kenya. Based on the results presented, the bootstrap percentage interval .1390 and .5199 do not

contain zero or $z = \frac{\text{Coefficient}}{\text{Std.Error}} = \frac{0.33156}{0.09299} = 3.5655$ which is greater than 1.96. This means that the

moderating effect of CS was statistically significant. The hypothesis was therefore rejected and concluded that CS does moderate the influence of IO on CD. The magnitude of causation has positively increased $\beta = -.34077$ $\beta = .33156$. Figure 1 shows that the direction from IO towards CD is red unlike the direction for both CS and the interaction (moderation) which is blues. The change from red to blue color signifies the interaction effect of CS has a positive influence on the direction of the relationship between the IO to CD.

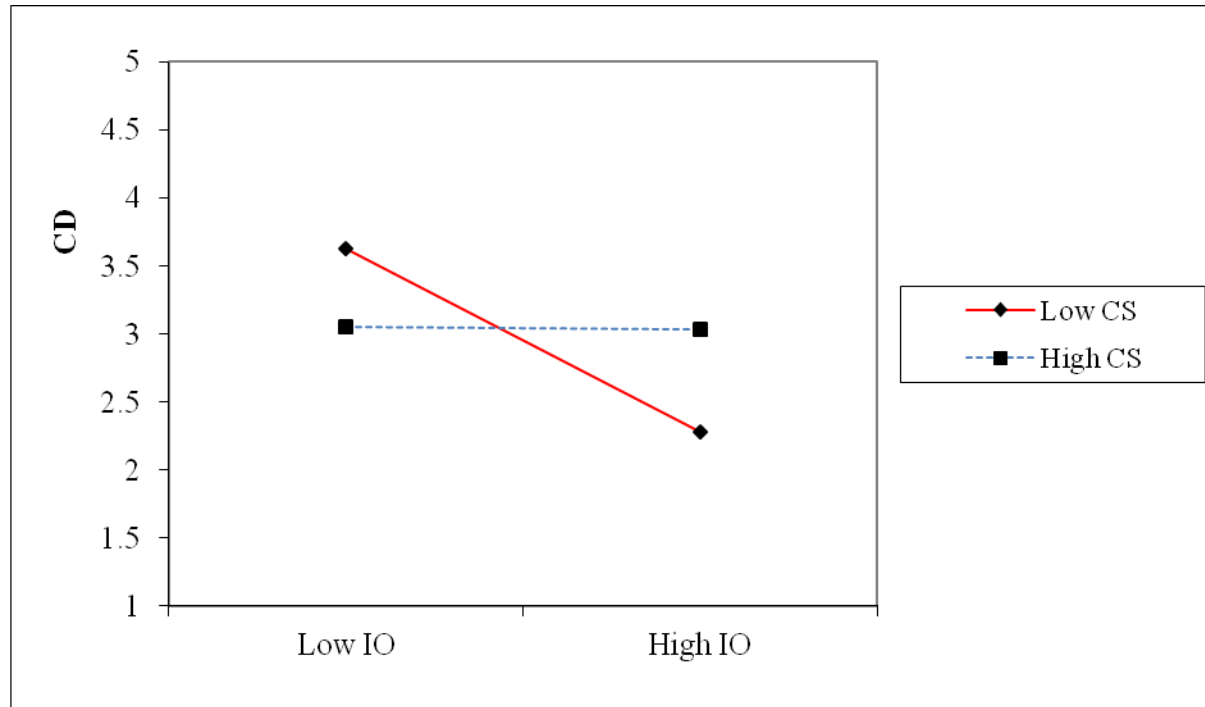


Figure 3 - Nature of moderating effect of Capital Structure between Institutional Ownership and Corporate Diversification

At low levels of IO shown in Figure 2, the CD is higher for firms with low CS than those with high. On the other hand, at high levels of IO, CD for firms with low CS decreases while those for firms with high CS tend to remain at the same level. Therefore, CS is described as an enhancing moderator as it could increase the effect of IO on CD. Empirically, CS was found to be having moderating roles but given Working capital finance-profitability relationship (Mahmood, Han, Ali, Mubeen, & Shahzad, 2019). This study, however, has found CS as a moderator in the relationship between IO and CD. Thus in regards to diversification, more can be attained so long as a firm jointly utilizes available funds raised through debt and equity as well as institutional ownership structure. To sum up, the results for the moderation effect of CS between IO and CD can be fitted in regression equation 1 as follows;

$$CD_{it} = 0.67683 - 0.34077IO_{it} + 0.04675CS_{it} + 0.33156(CS * IO)_{it}$$

$$(0.15342) \quad (0.05784) \quad (0.06644) \quad (0.9299)$$

Moderating Effect of Capital Structure in Foreign Ownership – Corporate Diversification Linkage

The moderating effect results of capital structure (CS) and foreign ownership (FO) were presented in Table 4 and Figure 3. In line with (Singh et al., 2003), CS had a positive relationship with corporate diversification

(CD) given coefficient estimate **0.33269**. For this reason, 1 unit change in CS increases CD by 0.33269 units. Similarly, FO positively influenced CD ($\beta = .16455$) which was contrary to the findings by (Phung et al., 2016). This implies that CD increases by 0.16455 units with one unit change in FO. The plausible explanation would be that foreign investors enable the firm to access massive resources (Ongore, 2011), diverse sources of funds (Li et al., 2009) from external financing (Ongore, 2011); (Mihai, 2012) and equity capital (Gurunlu & Gursoy, 2010). As a result, a firm needs to be aware that foreign investors at all times according to (Thai, 2019) seek to diversify their portfolios. Through this, listed firms can take advantage of their presence by enhancing their diversification strategies.

Table 4 - Moderating Effect of Capital Structure and Foreign Ownership

	Capital Structure	Interaction	Foreign Ownership	Corporate Diversification	
Capital Structure	0.0000000	0.00000000	0.00000000	0.00000000	
Interaction	0.0000000	0.00000000	0.00000000	0.00000000	
Foreign_Ownership	0.0000000	0.00000000	0.00000000	0.00000000	
Corporate_Diversification	0.3326916	-0.0784841	0.16454550	0.00000000	
	Original	Mean Boot	Std.Error	Percent 0.025	Percent 0.975
Intercept	0.42000	0.3968	0.09134	0.2671	0.5623
Capital_Structure > Corporate_Diversification	0.33269	0.3417	0.07021	0.2244	0.4714
Interaction > Corporate_Diversification	-0.07848	-0.0778	0.09274	-0.2576	0.0864
Foreign_Ownership > Corporate_Diversification	0.164545	0.1618	0.06554	0.0293	0.2795

The zero rows indicate that the lower triangular matrix was required to have a plot of bootstrap in Partial least squares path modeling (Plspm) according to R-Studio Statistical package

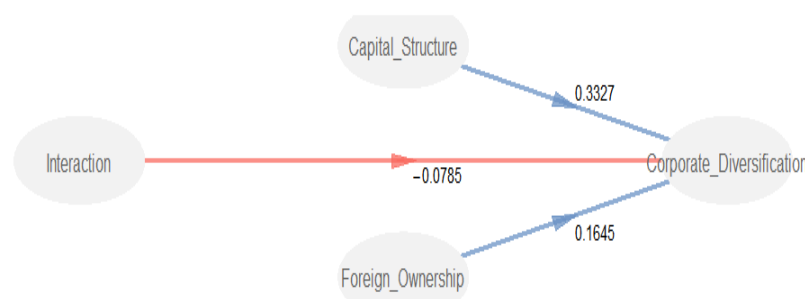


Figure 4 - Graphical Representation of Partial Least Squares Boots Path Diagram

Moreover, the interaction effect between CS and FO on CD was found to be negative ($\beta = -.07848$). The study hypothesis (Ho2) on this moderation was; Capital structure does not moderate the relationship between foreign ownership and corporate diversification of firms listed at NSE in Kenya. The bootstrap percentage

interval $-.2576$ and $.0864$ contains zero or $z = \frac{\text{Coefficient}}{\text{Std.Error}} = \frac{-.07848}{0.09274} = -.8462$ which is less than 1.96. Since the moderation effect was not significant, hypothesis (Ho2) failed to be rejected and concluded that CS does not moderate the relationship between FO and CD. This implies in this study that the interaction of capital structure and foreign ownership do not have a significant causal effect on corporate diversification. Checking in Figure 3, the direction of foreign ownership and capital structure towards corporate diversification is blue. However, the direction of the interaction changed to red, that is, the magnitude of causation has negatively decreased $\beta = .1645$ $\beta = -.0785$. Given this, an inverse and insignificant direction were implying the antagonistic effect by the moderator (CS). At low levels of FO, as shown in Figure 4, the CD is higher for firms with high CS than those with low CS. At high levels of FO, CD tends to increase slightly for both firms with high and low CS.

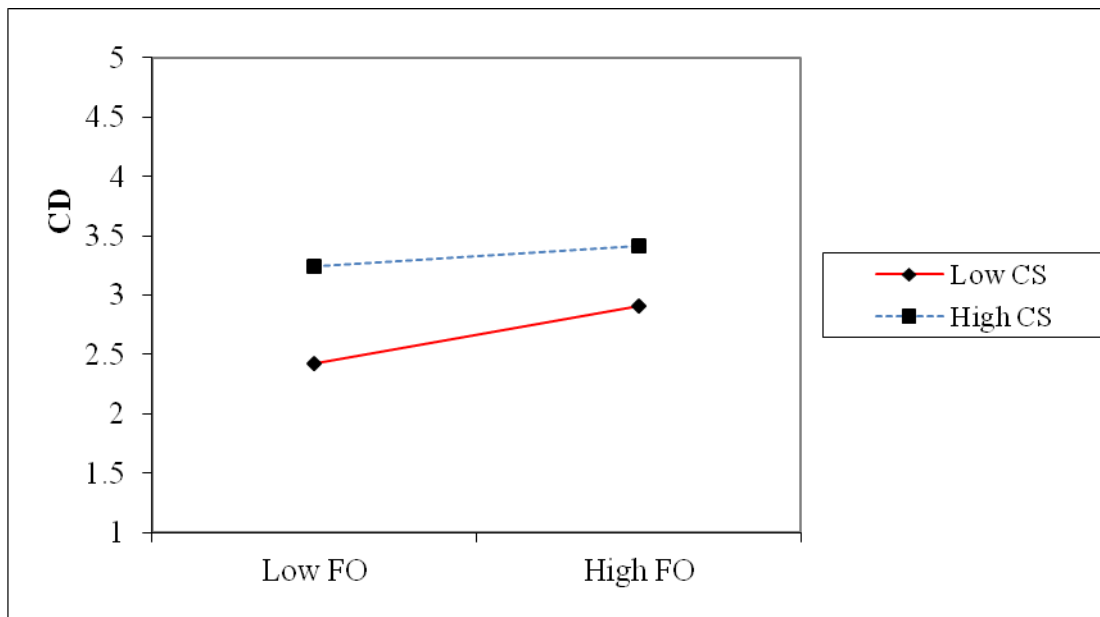


Figure 5 - Nature of moderating effect of Capital Structure between Foreign Ownership and Corporate Diversification

The results for the moderation effect of Capital Structure between Foreign Ownership and Corporate Diversification can be fitted in regression equation 2 as follows

$$CD_{it} = 0.420000 + 0.164545FO_{it} + 0.33269CS_{it} - 0.07848(CS * FO)_{it}$$

(0.09134) (0.06554) (0.07021) (0.09274)

Discussion

The study determined the moderating effect of capital structure in the relationship between ownership structure (institutional and foreign ownership) and corporate diversification of listed firms at NSE in Kenya. To begin with, the capital structure was an enhancing moderator and thus increases the effect of institutional ownership on corporate diversification. This is evident since the direct linkage between institutional

ownership and corporate diversification was negative. This was so institutional investors might shun diversification given that they are cautious and careful with their investments (Chung & Zhang, 2011). However, there was a positive impact on the interaction effect of capital structure. It was therefore concluded that the interaction effect of capital structure positively influences the direction of the relationship between institutional ownership and corporate diversification. Sometimes, a firm is having myopic institutional investors who only have short term investment horizon (Dong & Ozkan, 2008). If left alone, therefore, such institutional investors' decisions will be unfavorable to diversification. However, once the institutional investors' efforts are interlinked with the provision of financial resources through debt and equity, corporate diversification will increase. Therefore, the study suggests the utilization of equity raised from institutional investors as to lower proportion of debt which in turn lowers the capital structure. Listed firms are advised to maintain the least number of institutional investors. As a result, the interaction between capital structure and institutional ownership will positively enhance corporate diversification.

From the direct effect results, foreign owners in the firm positively drive corporate diversification. This is so given that such investors according to (Thai, 2019) aim at diversifying their portfolios. Moreover, foreign investors provide massive resources (Ongore, 2011), diverse sources of finances (Li et al., 2009) which will be utilized in undertaking corporate diversification. Capital structure was found to be having an antagonistic moderating effect as it could reverse the effect of foreign ownership on corporate diversification. Thus, the interaction of capital structure overturns the positive effect of foreign ownership on corporate diversification. In listed firms, the outcome, that is, corporate diversification could be increased once the level of foreign ownership and capital structure is aligned. First, the study suggests low levels of foreign ownerships be maintained but increase the firm's capital structure given the proportion of debt and equity. The latter is possible as listed firms could take advantage of financial resources availed by foreign investors alongside their equity capital. As a result, the outcome given the low levels of foreign ownership and high capital structure will be increased diversification. On the other hand, the same but slight increase in diversification could be achieved but slightly if the firm decides to increase the number of foreign investors but decrease the proportion of both debt and equity in its capital structure.

Generally, modern portfolio theory dwells on the ability of a firm to reduce risk through diversification. Despite this, other than the intention to reduce risk, owners are tasked with approving diversification plans. The study examined foreign investors who according to (Thai, 2019) aim at creating a portfolio through diversification. Also, institutional investors are known to influence the type and risk levels of each investment decisions made by the firm (Al-Thuneibat, 2018). The study thus contributes to modern portfolio theory given the analysis of the effect of institutional and foreign ownership structures on diversification which in turn is aimed at reducing the risks. The trade-off theory on the other hand advocates for determination of optimal capital structure through trading off of costs against benefits. Other than having an optimal capital structure, a firm could utilize it in driving its diversification which is mainly the owner's desire. The study findings thus contribute to trade-off theory by assessing the interaction of capital structure with institutional and foreign investor's objective of boosting diversification plans of firms. Future research studies could assess other measurement approaches to capital structure and corporate diversification. Moreover, themes as firm size, firm age, board characteristics, and shareholder activism could be used as moderators. Instead of examining capital structure as a whole, future researchers could direct their attention on either debt or equity capital.

Conclusion

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